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Small Farm Husbandry: Cow, Sheep and Goat for Meat Production

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**Small Farm Husbandry:
Cow, Sheep and Goat for Meat Production
STOCKSCH 268
3 Credits**

Instructor:

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Course Description

This course provides students with a farmer's perspective on the sustainable management of cows, sheep and goats on a small farm. The course provides students with a clear understanding of how to think through the planning and management of cows, sheep and goats for meat production. All aspects from purchasing and nutrition to marketing and finances will be addressed. This course also brings awareness to the U.S. meat industry and supports students in becoming educated consumers and producers. Students will walk away with a rudimentary plan on how to incorporate ruminants into their small farm plan.

Learning Objectives/ Course Goals

Students will gain the knowledge related to the planning and management of a diversified livestock farm for meat production. Specifically, students will adopt the following practices

- Identify and utilize sustainable management practices for livestock
- Develop critical thinking skills on designing and implementing infrastructural systems
- Understand the different feed options for cows, sheep and goats
- Comprehension of the complete life cycle management of ruminants for meat production
- Awareness of possible products and markets that would benefit a farm
- Understand the rules and regulations of running a livestock farm business
- Gain perspective on how to approach farm finances

Required Textbooks:

The Art and Science of Grazing: How Grass Farmers Can Create Sustainable Systems for Healthy Animals and Farm Ecosystems, by Sarah Flack, \$33.95

Recommended Textbooks:

The New Livestock Farmer: The Business of Raising and Selling Ethical Meat, by Recca Thistlethwaite and Jim Dunlop, 2015, Cost \$29.95

Storey's Guide to Raising Beef Cattle, 3rd Edition: Health, Handling & Breeding,
by Heather Smith Thomas, Storey Publishing 2009, Cost \$15.25

Grass-Fed Cattle: How to produce and Market Natural Beef, by Julius Ruechel
Storey Publishing, 2006, Cost \$24.95

Storey's Guide to Raising Sheep, 4th Edition: Breeding, Care, Facilities, by Carol Ekarius & Paula Simmons, Storey Publishing 2009, Cost \$17.20

Storey's Guide to Raising Meat Goats, 2nd Edition: Managing, Breeding, Marketing,
by Maggie Sayer, Storey Publishing 2010, Cost \$16.50

Outline of Topics

Developing Infrastructure and Understanding the Fixed Costs of Starting a Farm-

Students will acquire knowledge of the differences, advantages, and the disadvantages in breed selection, housing and fencing. Students will acquire an understanding of where and how to navigate the purchasing in livestock and how to determine if they are making a good selection. Students will learn multiple options for housing that reflects a sustainable approach as well as cost analysis. Students will learn how to determine their fencing needs based on grazing choices. All aspects of infrastructure covered will include financial analysis.

Gaining Perspectives on Sustainable Options of Keeping Livestock Healthy- Students will learn about the digestive process of ruminants and their physiology in relation to their feed requirements. Students will explore grass farming options, alternative feed options and how these relate to climate change and resource availability. Students will learn the importance of animal's mineral needs and the importance of reviewing the nutritional availability through hay analysis, soil tests and pasture observations to help support their requirements.

Understanding Breeding, Gestation Cycles and Birthing- Students will learn about the cycles of breeding and gestating. They will learn different approaches to breeding, necessities for birthing and raising young ruminants, as well as understanding possible challenges that arise during these cycles.

Illness, Disease and Common Problems- Students will learn how to locate resources to support them during their livestock's time of illness. Participants will develop a plan outlining what steps to take when they perceive something to be wrong with an animal. Students learn the

importance of their relationship with their vet and will gain confidence in being able to explain clearly their concerns. Students gain a basic understanding of common problems on the farm and how best to deal with the situation.

Learning Rules and Regulations- Each student will learn about their options with farm certifications, town and national regulations as well as the importance and different ways to navigate record keeping. This topic will be addressed throughout the semester.

Products and Processing- Students will learn product options for each animal. Will gain an understanding as to how to price each product and what rules and regulations are attached to processing that product. Students will have the opportunity to explore a USDA slaughterhouse as well as an on- farm slaughter process. As a group learn how to break down a carcass and learn all of the available cuts.

Marketing- Student will learn about different marketing options and what requirements and challenges that are associated with them. Students will explore different media sources to acquire new customers and learn the importance of labeling, the deception of claims, and overall how to determine the best marketing solution for their demographic location.

Structuring Finances- Students will learn options on financial records. Students will learn how to find funding to support their farm. Students will also learn about structuring their finances to include taxes, insurance and other expenses that are not always apparent with farming. Participants learn how to recognize fixed verses variable costs and how to create a practical enterprise budget.

Course Requirements

Participation in weekly classes and field trips- Attendance and participation is mandatory. Material is not only acquired from assignments but also lectures, field trips and discussions. If circumstances arise that prohibit attendance then contact me directly via email, text or by phone. Each class not attended there will be a 5 point deduction from the final point score. Field trips will be held on Tuesdays. Field trips provide an opportunity to explore see how material learned in class is applied, view different systems and learn of the common struggles of local farmers.

Written Work

Assignments- There will be six written assignments throughout the semester that further the learning of the material that we will be covering and focus on building a farm plan.

1. Selecting Breeds and Developing Purchasing Livestock Plan
2. Developing Sustainable Housing Infrastructure
3. Creating a grazing plan and determining Fencing needs
4. Developing a nutrition perspective and plan
5. Developing an emergency illness plan and learning how to navigate resources
6. Product and Marketing Plan

Reading Reflections- Before each lecture there will be an article or document to read. A paragraph reflection on the material will be due prior to arriving to class. Students should be prepared to discuss readings assigned prior to class.

Farm Visit and Blog Entry - This assignment requires physically visiting a farm that is similar to the student's production of interest. Farm chosen must raise at least one of the animals of focus in the class. During the visit observe, reflect on class material, participate in activities, help with work and take the information gained to complete this assignment. After the farm visit a 2 page paper on observations, insight and knowledge gained will be submitted. The final step will be to consolidate this paper into a blog reflection stating the farm and your experience/ observations of their systems. The blog post should be around 400 words long and must have at least 1 picture.

Meat Consumption Reflection - Throughout the semester students will observe their personal consumption of meat on a weekly basis. At the end of the semester a reflection on the observations of consumption over the semester will be due. In this paper you will state any changes or appreciations gained within your personal diet. Awareness of meat consumption is a big step in making the industry sustainable.

Final Presentation - There are two options for the final assignment. Students will have 15 -20 minutes to present. A reflection paper will accompany the presentation with details and explanations on the research acquired.

1. Presentation of your farm plan. This is the student's opportunity to clearly articulate their farm dream. This presentation will include all aspects of a start-up farm such as; breed, housing, mission and finances.
2. Present on a special interest topic in the field of ruminants.

Grading

Assignments: 50 points each x 6 assignments= **300 points**

Farm Visit & Blog Entry: **150 points**

Farm name and contact: 20

Reflection Paper: 30

Blog Entry: 100

1005-916 = A

915-886 = A-

885-856 = B+

855-816 = B

815-786 = B-

785-756 = C+

755-726 = C

725-696 = C-

695-646 = D+

645-600 = D

600-0 = F

Meat Consumption Reflection: **50 Points**

Reading reflections: 15 points each x 10 = **150 points**

Final Project: **230 points**

Outline: 30

Presentation: 125

Paper: 75

Attendance and Participation: 5 pts. Each class = **125 points**

Accommodation Statement

The University of Massachusetts Amherst is committed to providing an equal educational opportunity for all students. If you have a documented physical, psychological, or learning disability on file with Disability Services (DS), you may be eligible for reasonable academic accommodations to help you succeed in this course. If you have a documented disability that requires an accommodation, please notify me within the first two weeks of the semester so that we may make appropriate arrangements.

Academic Honesty Statement

Since the integrity of the academic enterprise of any institution of higher education requires honesty in scholarship and research, academic honesty is required of all students at the University of Massachusetts Amherst. Academic dishonesty is prohibited in all programs of the University. Academic dishonesty includes but is not limited to: cheating, fabrication, plagiarism, and facilitating dishonesty.

Appropriate sanctions may be imposed on any student who has committed an act of academic dishonesty. Instructors should take reasonable steps to address academic misconduct. Any person who has reason to believe that a student has committed academic dishonesty should bring such information to the attention of the appropriate course instructor as soon as possible. Instances of academic dishonesty not related to a specific course should be brought to the attention of the appropriate department Head or Chair. Since students are expected to be familiar with this policy and the commonly accepted standards of academic integrity, ignorance of such standards is not normally sufficient evidence of lack of intent (http://www.umass.edu/dean_students/codeofconduct/acadhonesty/).

